Water telescope’s first sky map shows flickering black holes

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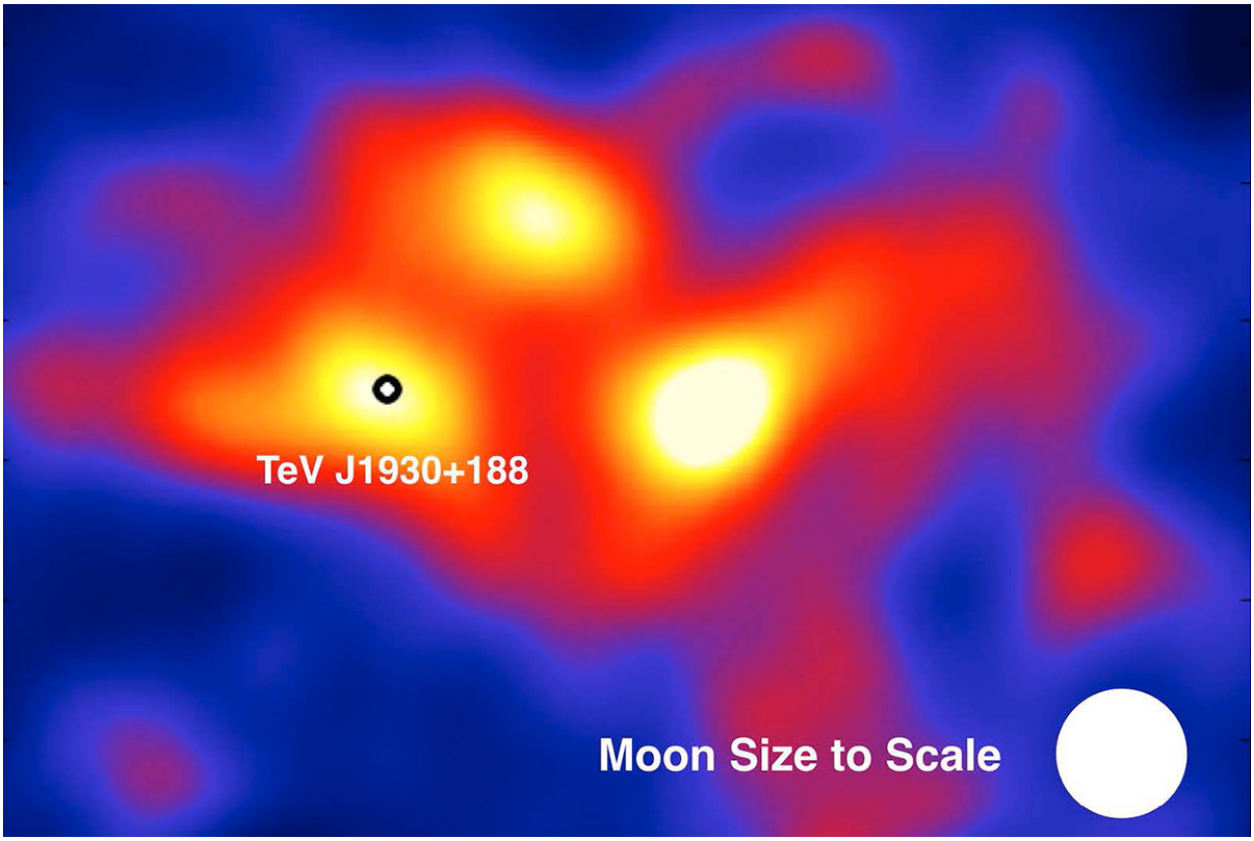

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Twinkle, twinkle, little black hole. The High Altitude Water Cherenkov observatory has released its first map of the sky, including the first measurements of how often black holes flicker on and off. It has also caught pulsars, supernova remnants, and other bizarre cosmic beasts.

“This is our deepest look at two-thirds of the sky, as well as the highest energy photons we’ve ever seen from any source,” says Brenda Dingus of Los Alamos National Laboratory, who presented the map at the American Physical Society meeting in Salt Lake City, Utah on 18 April. “We’re at the high energy frontier.”

HAWC has been operating from the top of a mountain in central Mexico for about a year, and has caught some of the highest-energy photons ever observed. It is sensitive

to gamma rays between 0.1 and 100 teraelectronvolts (TeV) in energy – more than 7 times higher energy than the particles produced in the Large Hadron Collider. The most energetic photon they've picked up so far is 60 TeV.

April 18, 2016By Lisa Grossman - New Scientist